

FIGURE 1

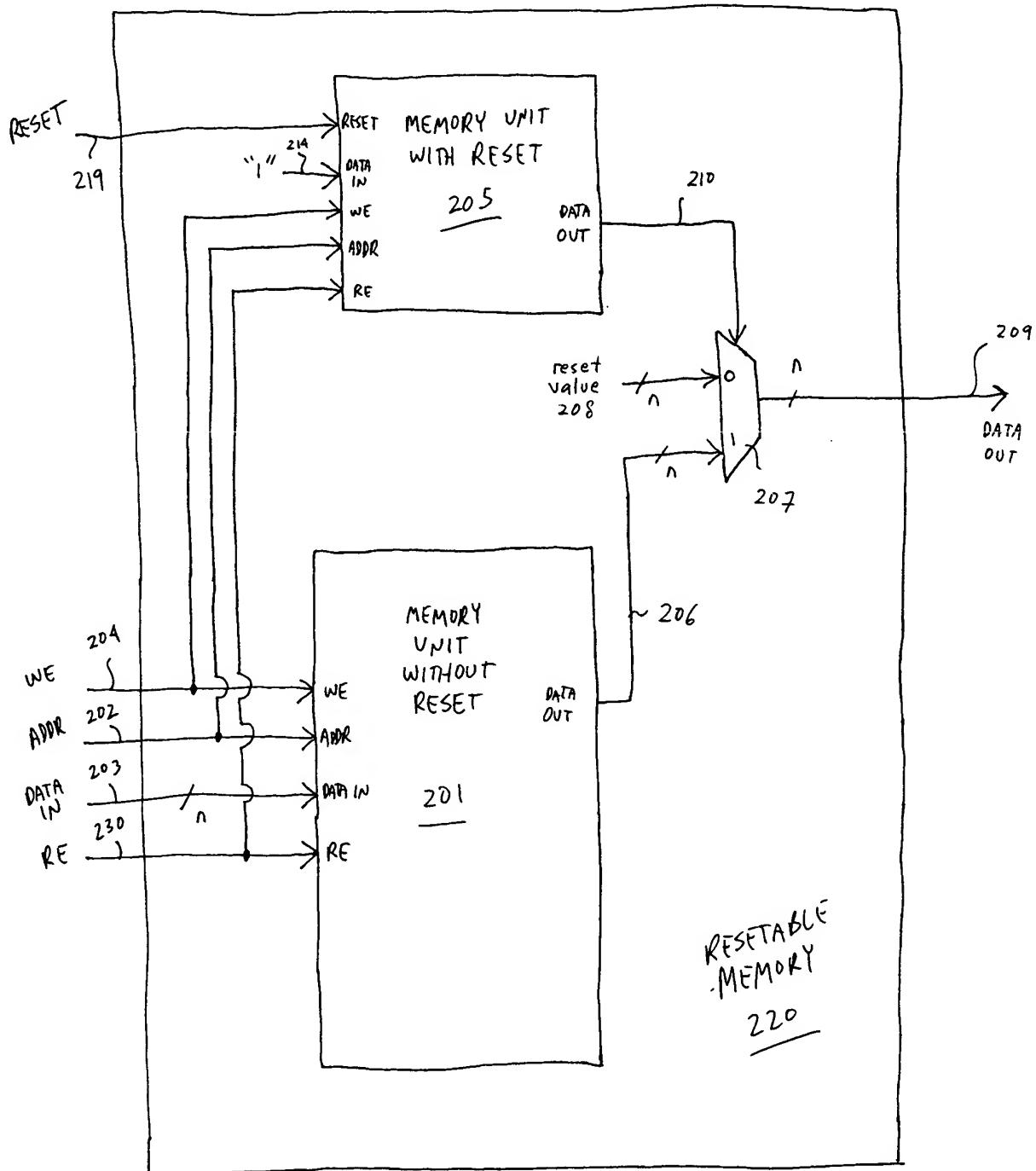


FIGURE 2A

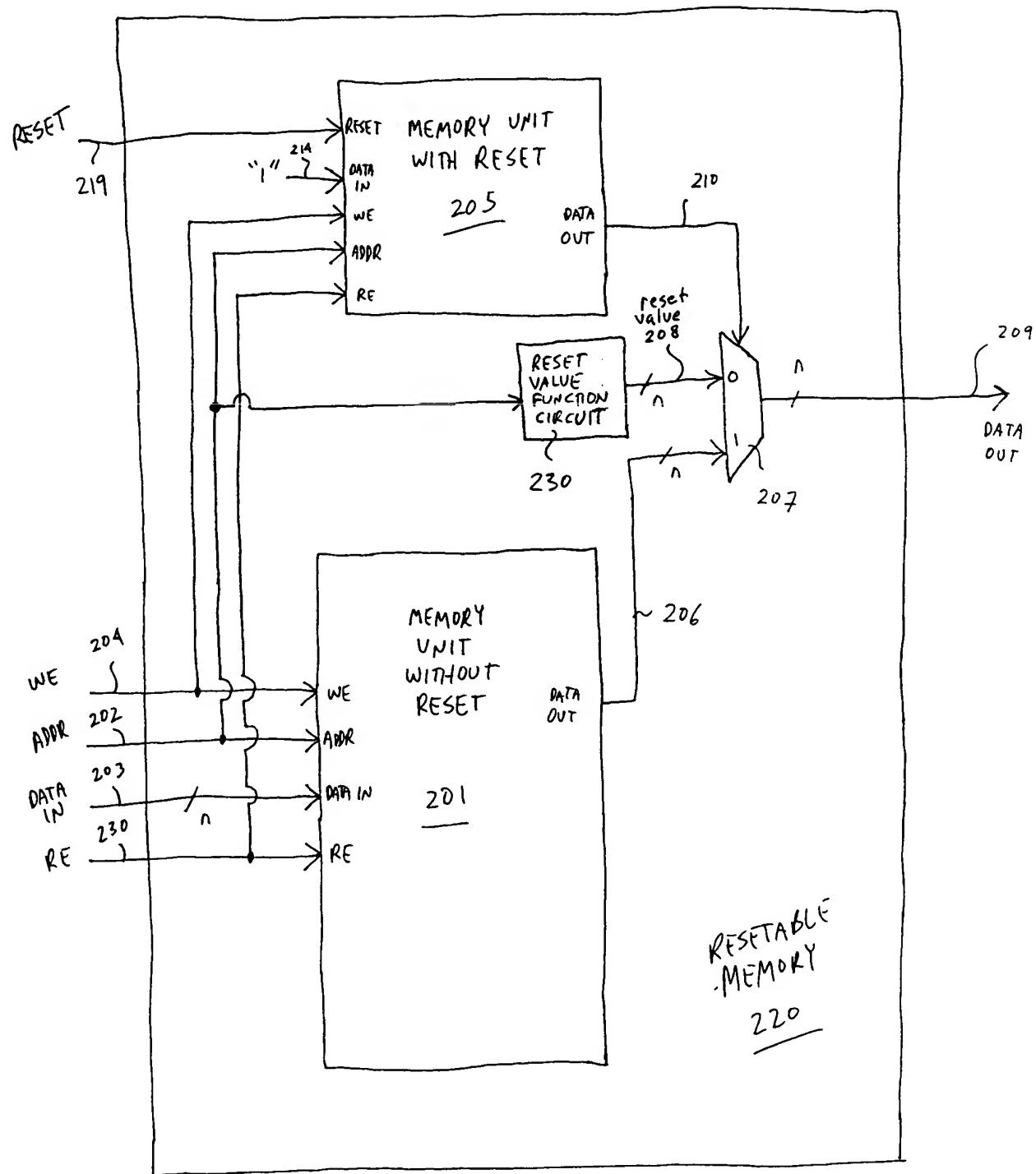


FIGURE 2B

```
module synReset(data_in, addr, reset, we, clk, data_out);

parameter data_width = 1024;
parameter addr_width = 10;
parameter RAMsize = 8;
parameter reset_value = 8'D0;

input [data_width-1:0] data_in;
input [addr_width-1:0] addr;
input reset, we, clk;
output [data_width-1:0] data_out;

integer i;
reg [data_width-1:0] mem [RAMsize-1:0];
wire [data_width-1:0] data_out;
//synthesis loop_limit 2000
always @(posedge clk)
begin
    if(reset == 1'b1)
        begin
            for (i=0; i < RAMsize ; i=i+1)
                begin
                    mem[i] = reset_value;
                end
        end
    end else if(we == 1'b1)
        begin
            mem[addr] = data_in;
        end
    end
assign data_out = mem[addr];
endmodule
```

FIGURE 2C

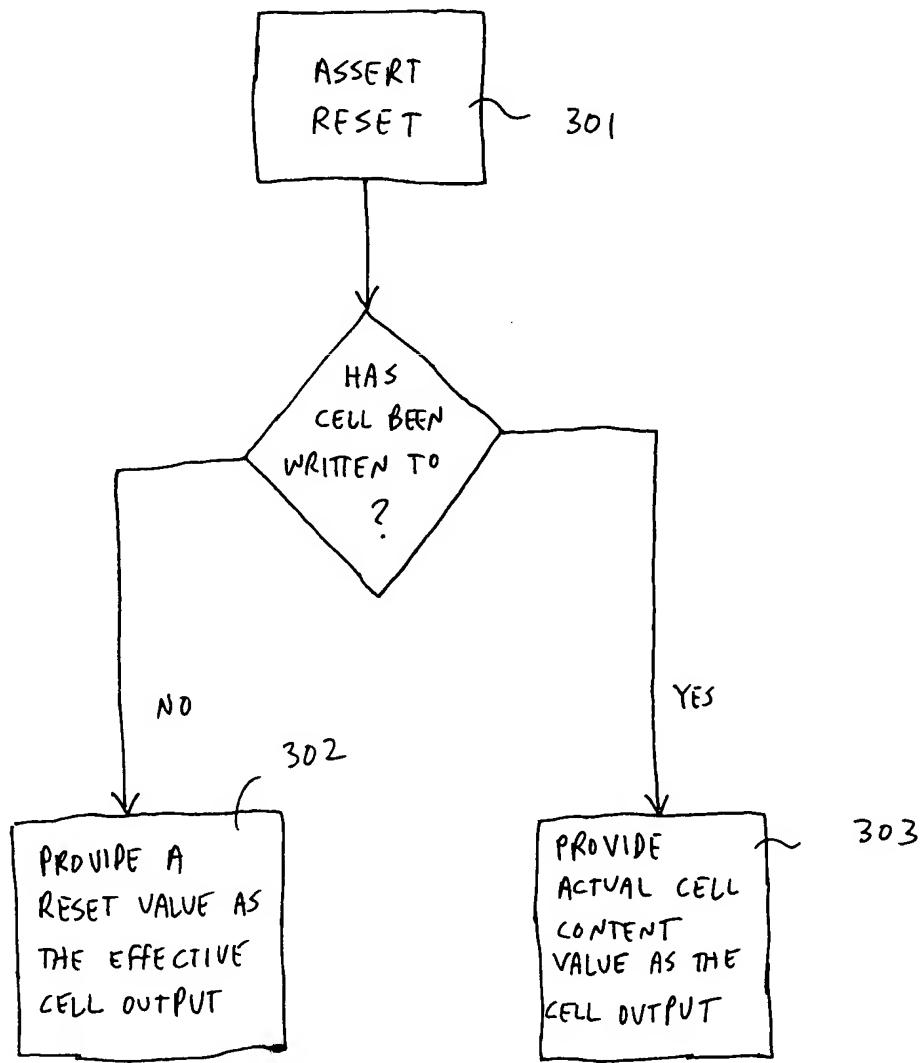


FIGURE 3

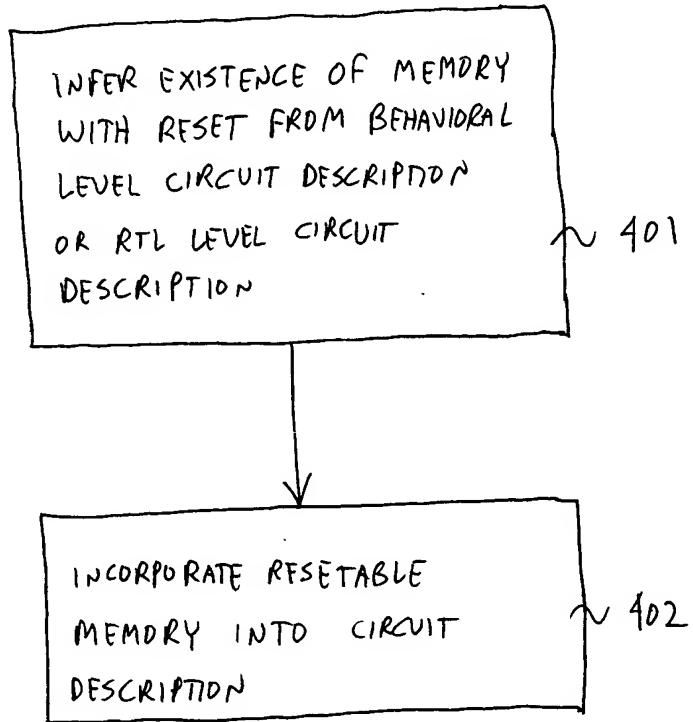


FIGURE 4

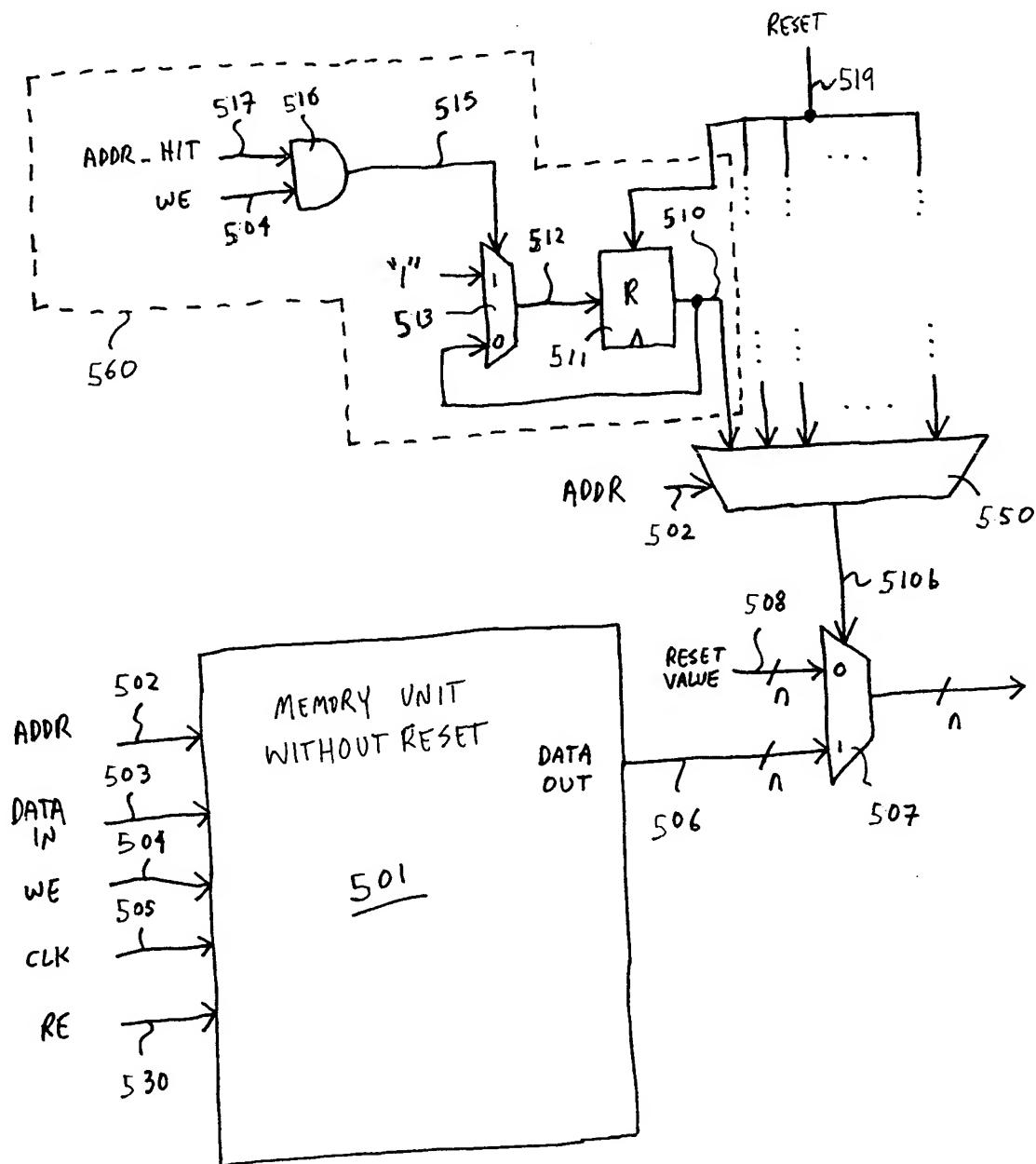


FIGURE 5.

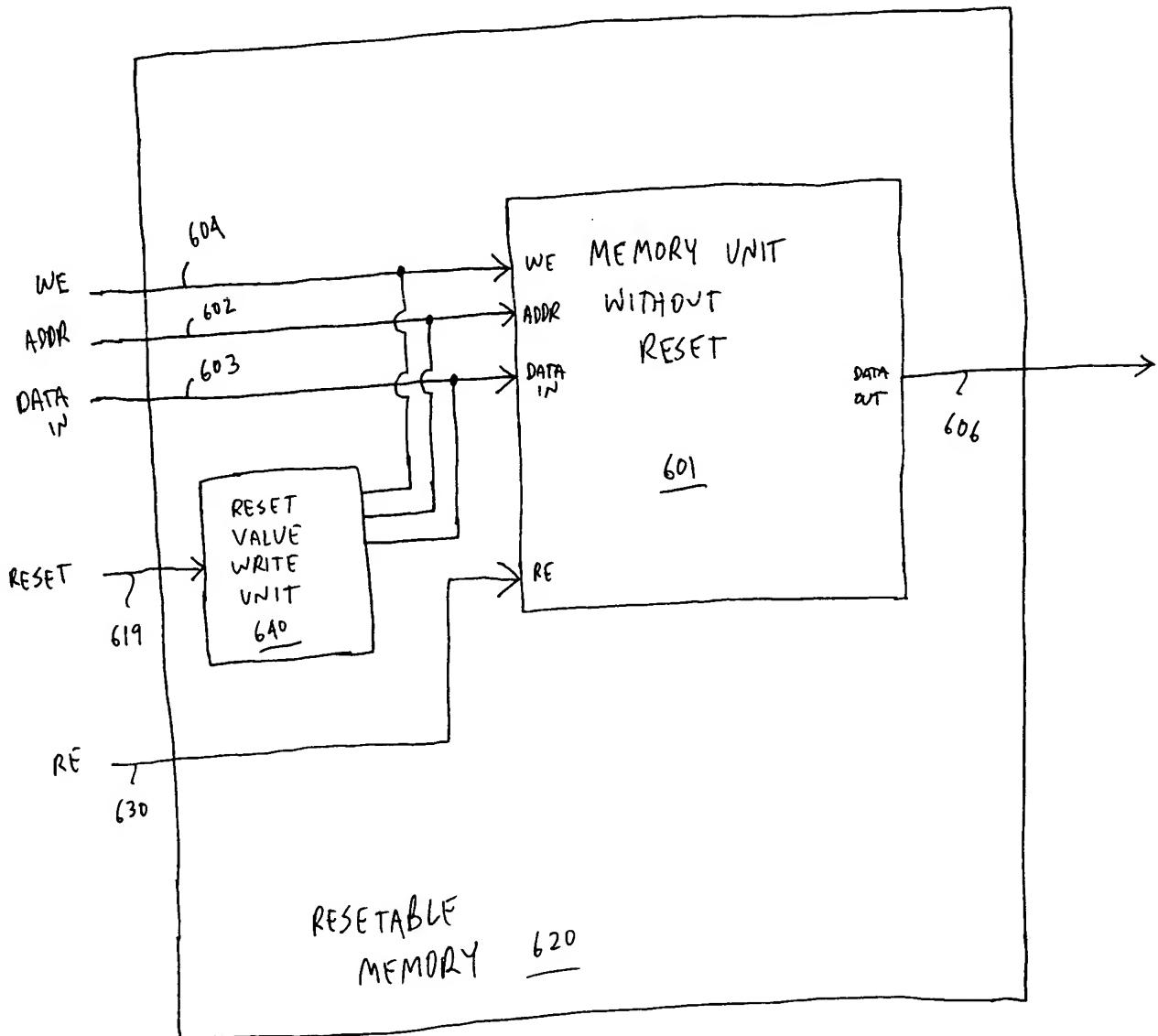


FIGURE 6

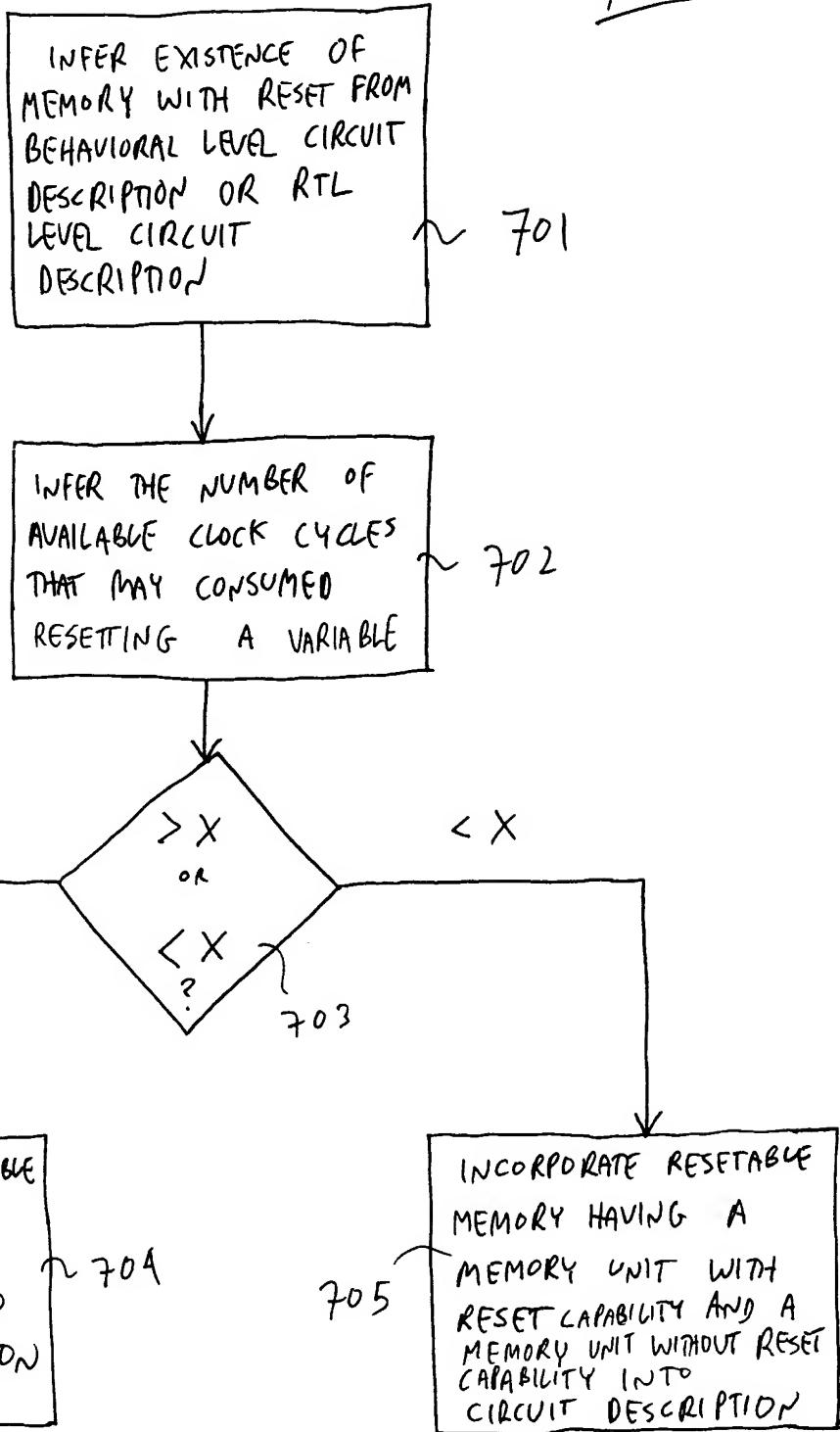


FIGURE 7

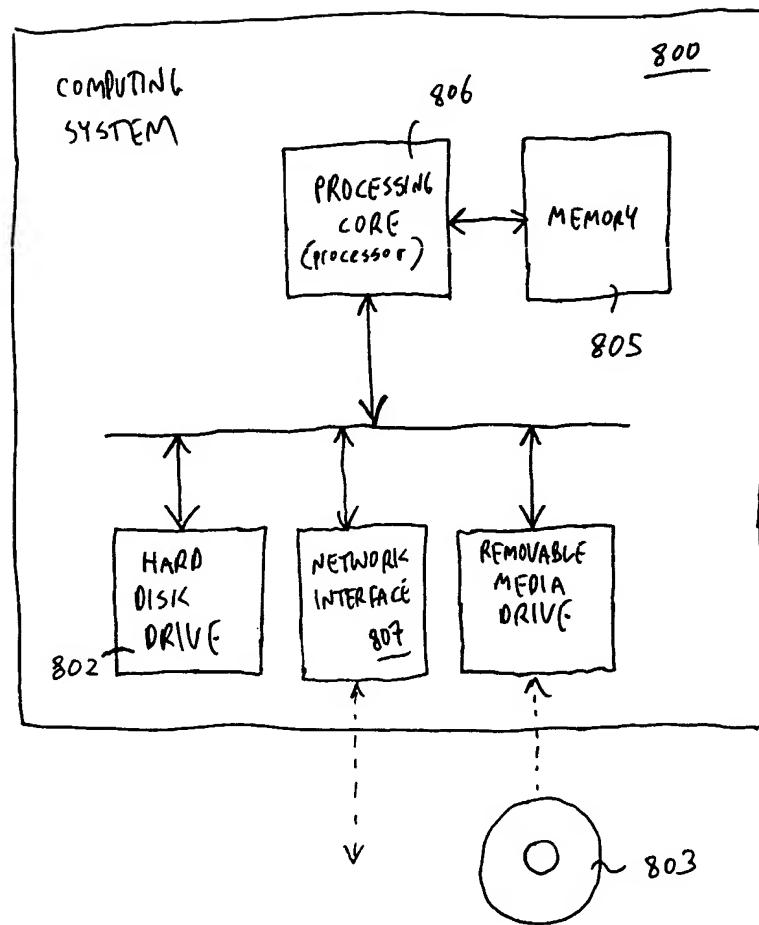


FIGURE 8